

**List of Graduate Courses Available to Undergraduate-level International Exchange Students <For 3Q, 4Q of the 2024-2025 Academic Year>**

**Eligibility for Acceptance**

- Students must be final year undergraduates or at an equivalent level.
- Students must meet the specific criteria for each course defined by the instructor and indicated in the final column of the table.
- Students must be enrolled on an appropriate exchange program that allows access to these courses.

As of October 2024

**NOTE: TAKING ANY GRADUATE-LEVEL COURSES (400-LEVEL OR HIGHER) THAT IS NOT ON THIS LIST IS NOT PERMITTED UNDER ANY CIRCUMSTANCES. EVEN IF THE COURSE INSTRUCTOR INDIVIDUALLY APPROVES YOUR ENROLLMENT, YOUR REGISTRATION FOR SUCH A COURSE WILL BE REJECTED.**

Graduate Major	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Mathematics	MTH.A403	Advanced topics in Algebra C	Yoshikawa Shou	3Q	Undergraduate-level knowledge of abstract algebra and number theory
	MTH.A404	Advanced topics in Algebra D	Yoshikawa Shou	4Q	Undergraduate-level knowledge of abstract algebra and number theory
	MTH.B403	Advanced topics in Geometry C	Nakamura Satoshi	3Q	Undergraduate-level knowledge of geometry and complex analysis
	MTH.B404	Advanced topics in Geometry D	Nakamura Satoshi	4Q	Undergraduate-level knowledge of geometry and complex analysis
	MTH.E436	Special lectures on advanced topics in Mathematics F	Bez Richard Neal, Kinoshita Shinya	4Q	Undergraduate-level knowledge of functional analysis and harmonic analysis
Physics	PHY.C444	Quantum Transport	Fujisawa Toshimasa	4Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
	PHY.C445	Physics of Two-Dimensional Materials	Pu Jiang	4Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
	PHY.C449	Laser Physics	Somiya Kentaro	4Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
	PHY.C450	Quantum Theory of Electrons in Solids	Ishizuka Hiroaki	3Q	Prerequisites: undergraduate-level quantum mechanics, thermodynamics and statistical mechanics.
	PHY.C453	Biophysics II	Matsushita Michio, Fujiyoshi Satoru	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
	PHY.F432	Astrophysics	Dotani Tadayasu	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
	PHY.Q434	Field Theory II	Ito Katsushi	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
	PHY.S440	Statistical Mechanics III	Sasamoto Tomohiro	3Q	Students are required to have knowledge of the undergraduate level of physics, electricity and magnetism, analytical dynamics, quantum mechanics, thermodynamics and statistical mechanics.
Earth and Planetary Sciences	EPS.A429	Advanced Earth and Space Sciences L	Gilbert Romain Alexis	3Q	
	EPS.A422	Advanced Earth and Space Sciences D	Yokoyama Tetsuya	4Q	
	EPS.A428	Advanced Earth and Space Sciences K	Ozaki Kazumi	4Q	
Mechanical Engineering	MEC.D433	Self-excited vibration	Nakano Yutaka	3Q	Students must have knowledge about vibration analysis method for one degree of freedom system and multi degree of freedom system.
	MEC.H434	Advanced Course of Actuator Engineering	Suzumori Koichi, Yoshida Kazuhiro	3Q	
	MEC.E432	Properties of Solid Materials	Murakami Yoichi, Fushinobu Kazuyoshi	3Q	
	MEC.C431	Mechanics of Composite Materials	Todoroki Akira, Sekiguchi Yu	4Q	
	MEC.E433	Advanced Thermal-Fluids Measurement	Kikura Hiroshige, Saito Takushi	4Q	
	MEC.H433	Mechatronics Device and Control	Yamaura Hiroshi	4Q	
	MEC.M434	Space Robotics	Nakanishi Hiroki	4Q	
	MEC.G433	Joining	Sato Chiaki, Yamazaki Takahisa	4Q	
	MEC.C435	Solid State Ionics	Araki Wakako	4Q	
	MEC.U434	Advanced Internal Combustion Engine Engineering and Future Power Train A	Kosaka Hidenori, Hirai Shuichiro	3~4Q	Intensive course with irregular schedule (11:00-14:00, 5 days x 3 weeks). Please make a contact with Prof. Fushinobu (fushinobu.k.aa@m.titech.ac.jp) before registration.

Graduate Major	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Systems and Control Engineering	SCE.C401	System Identification and Estimation	Yamakita Masaki	3Q	
	SCE.S402	Fluid Robotics	Tsukagoshi Hideyuki	3Q	
	SCE.A405	Inverse Problems and Data Assimilation	Amaya Kenji	3Q	
	SCE.C452	Nonlinear and Adaptive Control	Hayakawa Tomohisa	3Q	
	SCE.I404	Automobile Transportation System and Environmental Impact	Sato Susumu	4Q	
	SCE.I435	Visual and Knowledge Information Processing	Kawakami Rei	4Q	
	SCE.C453	Network Control Systems	Ishizaki Takayuki	4Q	
Electrical and Electronic Engineering	EEE.S411	Guided Wave Circuit Theory	Nishikata Atsuhiko, Aoyagi Takahiro	3Q	Knowledge of electromagnetics
	EEE.D421	Imaging Materials	Iino Hiroaki	3Q	
	EEE.D442	Special Seminar on Semiconductor Memory	Wakabayashi Hitoshi, Matsuhashi Hideki, Taguwa Tetsuya, Fujisawa Hiroki, Miyashita Toshihiko, Uchiyama Shiro, Yoshida Kazuyoshi, Goda Akira, Nariyoshi Yasuhiro	3Q	
	EEE.P413	Power electronics application to power systems	Hagiwara Makoto	3Q	
	EEE.P402	Control and analysis of power and motor drive systems	Fujita Hideaki	3Q	Under graduate-level knowledge on electric machinery
	EEE.D444	Special Lecture II on Integrated Green-niX	Wakabayashi Hitoshi, Shimamori Tomoko, Sutani Takumichi, Murakami Daisuke, Shimizu Ken, Sasaki Takafumi, Karasawa Hajime, Takahashi Atsushi, Koyama Masato, Sasaki Shun, Nariyoshi Yasuhiro, Tsutsui Kazuo, Shirokura Takanori, Tsunekawa Koji, Sudo Minoru, Tada Munehiro, Sato Yosuke, Fukazawa Hiromasa, Ishibashi Masato	3Q	
	EEE.P461	Pulsed Power Technology	Takeuchi Nozomi	3Q	Under graduate-level knowledge on electrical circuits and electromagnetics
	EEE.D441	Information Storage Engineering	Nakagawa Shigeki, Takamura Yota	4Q	
EEE.P414	Power electronics control and analysis	Fujita Hideaki	4Q	Under graduate-level knowledge on power electronics	
Information and Communications Engineering	ICT.I415	VLSI System Design	Isshiki Tsuyoshi	3Q	Acquisition of basics of logic circuits, electrical circuits and integrated circuits
	ICT.A418	Human-Centric Information Systems II	Nagai Takehiro, Nakatani Momoko, Fujiki Daichi, Funakoshi Kotaro, Watanabe Yoshihiro, Yamaguchi Masahiro, Okumura Manabu, Kaneko Hirohiko, Suzuki Kenji, Slavakis Konstantinos, Motomura Masato, Obi Takashi, Shinozaki Takahiro	4Q	Sufficient basic academic skills in information and communications
	ICT.I419	VLSI Layout Design	Takahashi Atsushi	4Q	Sufficient basic academic skills in integrated circuits and algorithm
	ICT.H422	Computational Brain	Koike Yasuharu	4Q	Sufficient basic knowledge of machine learning
Industrial Engineering and Economics	IEE.D435	Computers in Society	Seaborn Katie	4Q	This course requires active participation in English, with a group project and regular discussions. Only those with a high level of English may take the course.
	IEE.D436	Healthcare Quality and Safety	Gu Xiuzhu	3Q	This course requires intensive class participation. Thus, only students with a high level of English who can participate in the classroom can register.
Materials Science and Engineering	MAT.C416	Advanced Course of Nano-Particles Science	Miyauchi Masahiro	3Q	Fundamental knowledge on inorganic ceramics materials is needed.
	MAT.M430	Quantum theory of metals	Nakatsuji Kan, Gohda Yoshihiro	3Q	
	MAT.P414	Soft Materials Function	Michinobu Tsuyoshi	3Q	
	MAT.P422	Organic Materials Design	Ougizawa Toshiaki	3Q	To master the fundamentals of polymer structure and physical properties at the undergraduate level.
	MAT.M412	Reliability and Durability of Metals and Alloys	Kobayashi Equo, Kobayashi Satoru	3Q	
	MAT.C412	Polymeric Biomaterials	Tsuge Takeharu, Hayashi Tomohiro	3Q	
	MAT.P403	Soft Materials Physics	Vacha Martin	3Q	
	MAT.P426	Thermal Properties of Materials	Morikawa Junko	4Q	
	MAT.M402-01	Characterization of Nanomaterials <b>[a]</b>	Sone Masato, Sannomiya Takumi	4Q	
	MAT.P417	Medical Polymers	Kojima Chie	4Q	
	MAT.P404	Soft Materials Functional Physics	Hayamizu Yuhei	4Q	Fundamental knowledge on chemical physics and quantum physics are needed.

Graduate Major	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Chemical Science and Engineering	CAP.A423	Advanced Organic Synthesis I	Ito Shigekazu	3Q	Knowledge of bachelor level organic chemistry is desirable.
	CAP.A424	Advanced Organic Synthesis II	Ito Shigekazu	4Q	Knowledge of bachelor level organic chemistry is desirable.
	CAP.A425	Advanced Biofunctional Chemistry I	Tanaka Katsunori	3Q	Knowledge of synthetic and bioorganic chemistry is required.
	CAP.A426	Advanced Biofunctional Chemistry II	Tanaka Katsunori	4Q	Knowledge of synthetic and bioorganic chemistry is required.
	CAP.C432	Physico-Chemical Property Analysis in Chemical Engineering	Taniguchi Izumi	3Q	Fundamental knowledge of chemical engineering and transport phenomena is required.
	CAP.C433	Phase Equilibrium Analysis in Chemical Engineering	Shimoyama Yusuke	3Q	Fundamental knowledge of chemical engineering and separation operation is required.
	CAP.C441	Transport Phenomena and Operation	Yoshikawa Shiro	4Q	Fundamental knowledge of chemical engineering and transport phenomena is required.
	CAP.C443	Advanced Reaction-Separation Process	Tago Teruoki, Shimoyama Yusuke	4Q	Fundamental knowledge of chemical reaction engineering and separation operation and process is required.
	CAP.I416	Catalysis for the Environmental Issues	Yoko Toshiyuki, Manaka Yuichi	3Q	
	CAP.I417	Introduction to Chemical Engineering (Unit Operation)	Tanaka Masayoshi	3Q	
	CAP.I423	Advanced Organic Materials Chemistry	Fukushima Takanori, Shoji Yoshiaki	3Q	
	CAP.I435	Advanced Geochemistry	Toyoda Sakae, Yamada Keita	3Q	
Mathematical and Computing Science	MCS.T408	Discrete, Algebraic and Geometric Structures	Suzuki Sakie, Nishibata Shinya, Umehara Masaaki, Arai Zin, Murofushi Toshiaki	3Q	
	MCS.T410	Applied Probability	Miyoshi Naoto, Nakano Yumiharu	3Q	
	MCS.T416	Logic and Computation	Kashima Ryo	4Q	
	MCS.T419	Stochastic differential equations	Nakano Yumiharu, Miyoshi Naoto	4Q	
Computer Science	CSC.T431	Cyber-Physical Systems	Watanabe Takuo	3Q	Students must have successfully completed the related courses or have equivalent knowledge.
	CSC.T433	Advanced Computer Architecture	Kise Kenji	4Q	
	CSC.T442	Internet Applications	Ohta Masataka	4Q	
Life Science and Technology	LST.A406	Molecular Developmental Biology and Evolution	Kume Shoen, Kawakami Atsushi, Tanaka Mikiko, Kajikawa Masaki, Nikaïdo Masato	3Q	Undergraduate-level basic knowledge of biochemistry, molecular biology and cell biology.
	LST.A407	Science of Metabolism	Hirasawa Takashi, Shiraki Nobuaki, Kato Akira, Masuda Shinji	3Q	Undergraduate-level basic knowledge of biochemistry, molecular biology and cell biology.
	LST.A408	Computational Biology	Itoh Takehiko, Yamada Takuji, Kitao Akio, Uriu Koichiro	3Q	Undergraduate-level basic knowledge of physical chemistry, biochemistry, molecular biology and cell biology.
	LST.A409	Physical Biology of the Cell	Hayashi Nobuhiro, Murakami Satoshi, Taguchi Hideki, Tokunaga Makio, Ishii Yoshitaka	4Q	Acquisition of basics of physical chemistry.
	LST.A410	Advanced Neuroscience	Suzuki Takashi, Ichinose Hiroshi, Miyashita Eizo, Hirota Junji, Kuroda Kumi, Yoshida Takako	4Q	Basic Knowledge of Neuroscience.
	LST.A421	Functional Life Science	Nakamura Nobuhiro, Orihara Kanami, Koshikawa Naohiko, Ogura Shunichiro, Kuroda Kumi	4Q	Acquisition of basics of biochemistry, molecular biology and genome biology.
	LST.B404	International Career Development Basics	Suzuki Takashi, Kobatake Eiry, Kume Shoen, Aizawa Yasunori, Mcglynn Shawn, Woltjen Knut, Moore Adrian	3~4Q	Basic Knowledge of Biochemistry and/or Molecular biology.
Architecture and Building Engineering	ARC.D422	Architectural Design Studio II	Okuyama Shin-ichi, Tsukamoto Yoshiharu, Yamazaki Taisuke, Murata Ryo, Nasu Satoshi, Shiozaki Taishin	3~4Q	
	ARC.D423	Architectural Design Studio III	Okuyama Shin-ichi, Tsukamoto Yoshiharu, Yamazaki Taisuke, Murata Ryo, Nasu Satoshi, Shiozaki Taishin, Katsuki Ayumi	4Q	
	ARC.D424	Theory of Architectural Space and Planning	Tsukamoto Yoshiharu, Lassila Anssi	3~4Q	
	ARC.D446	Theory of Architectural Design II	Okuyama Shin-ichi, Shiozaki Taishin	3~4Q	Only student in architectural course
	ARC.D447	Architectural Theory for Urban Space	Nousaku Fuminori, Tsukamoto Yoshiharu	3~4Q	
	ARC.D462	Architectural Behaviorology	Tsukamoto Yoshiharu, Okuyama Shin-ichi	3~4Q	

Graduate Major	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Civil Engineering	CVE.A431	Fracture Control Design of Steel Structures	Sasaki Eiichi	4Q	
	CVE.A434	Reliability, Risk and Resilience Assessment of Infrastructures	Matsuzaki Hiroshi	3~4Q	Basic knowledge of structural engineering is required.
	CVE.C402	Stability Problems in Geotechnical Engineering	Takahashi Akihiro	3Q	Basic knowledge of soil mechanics is required.
	CVE.C431	Physical Modeling in Geotechnics	Takahashi Akihiro, Sawada Mai	3~4Q	Basic knowledge of civil engineering and geotechnical engineering is required.
	CVE.D405	Transportation Science and Simulation	Seo Toru	4Q	
	CVE.D406	Urban Economic Analysis	Takayama Yuki	4Q	Basic knowledge of microeconomics and game theory is required.
	CVE.F432	Principles of Construction Management	Hasegawa Atsushi, Matsukawa Keisuke, Hiraishi Kazuaki, Maeda Yasuyoshi, Koizumi Yukihiko, Takesue Naoki, Maki Kotaro	3~4Q	
	CVE.G403	Water Chemistry for Environmental Engineering	Fujii Manabu	3Q	
	CVE.M401	Civil Engineering Analysis	Maruyama Taizo	3Q	Programming skills are required.
Global Engineering for Development, Environment and Society	GEG.E411	Atmospheric Environment in Megacities	Kanda Manabu, Varquez Alvin Christopher Galang	4Q	
	GEG.S402	The economics and systems analysis of environment, resources and technology	Tokimatsu Koji	4Q	
	GEG.S413	Science Media and Communication	Nohara Kayoko, Andrews Eden Mariquit, Salani Giorgio	3Q	
	GEG.S414	Methodology of Transdisciplinary Research	Nohara Kayoko, Salani Giorgio	4Q	
	GEG.T414	Linear Wave Theory and Simulation	Takada Jun-Ichi	3Q	Knowledge of partial differential equations, vector analysis, and Fourier analysis are expected.
Social and Human Sciences	SHS.L419	Special Lecture on Advanced Topics in Social and Human Sciences FA	Bektas Yakup	3Q	
	SHS.S444	Graduate Lecture in Science, Technology and Society F1B	Bektas Yakup	4Q	
Energy Science and Informatics Energy Science and Engineering <Interdisciplinary graduate major>	ESL.A405-01	Interdisciplinary Energy Materials Science 1 【大岡山】	Miyauchi Masahiro, Maeda Kazuhiko, Yamaguchi Akira, Okamoto Toshihiro, Muraishi Shinji	3Q	Conducted in Ookayama
	ESL.A405-02	Interdisciplinary Energy Materials Science 1 【すずかけ】	Miyauchi Masahiro, Maeda Kazuhiko, Yamaguchi Akira, Okamoto Toshihiro, Muraishi Shinji	3Q	Conducted in Suzukakedai
	ESL.A406-01	Interdisciplinary Energy Materials Science 2 【大岡山】	Matsumoto Hidetoshi, Ihara Manabu, Kimura Yoshisato, Nozaki Tomohiro, Matsuda Akifumi	4Q	Conducted in Ookayama
	ESL.A406-02	Interdisciplinary Energy Materials Science 2 【すずかけ】	Matsumoto Hidetoshi, Ihara Manabu, Kimura Yoshisato, Inagi Shinsuke, Matsuda Akifumi	4Q	Conducted in Suzukakedai
	ESL.A407-01	Energy system theory 【大岡山】	Kawabe Kenichi, Suekane Tetsuya, Yamada Akira, Obara Toru, Tokimatsu Koji, Otomo Junichiro	3Q	Conducted in Ookayama
	ESL.A407-02	Energy system theory 【すずかけ】	Kawabe Kenichi, Suekane Tetsuya, Yamada Akira, Obara Toru, Tokimatsu Koji, Otomo Junichiro	3Q	Conducted in Suzukakedai
	ESL.A408	Economy of energy system	Tokimatsu Koji, Wakeyama Tatsuya, Otomo Junichiro, Nishikizawa Shigeo, Goto Mika, Eto Ryo	4Q	
	ESL.H411	Topics in Applied Electrochemistry	Arai Hajime, Hirayama Masaaki, Hayashi Masahiko	4Q	
	ESL.H415	Advanced Organic Electrochemistry	Inagi Shinsuke	3Q	
	ESL.H450	Environmentally-Friendly Polymer Chemistry	Satoh Kotaro	4Q	Students are expected to have fundamental knowledge of polymer chemistry and polymer synthesis.
	ESL.I410	Optical properties of solids	Koshihara Shinya, Okimoto Yoichi	4Q	The students are expected to have basic knowledge of electromagnetism.
	ESL.J401	Advanced Metal Physics	Shi Ji	3Q	
	ESL.J402	Physical Chemistry for High Temperature Processes -Thermodynamics-	Hayashi Miyuki	3Q	Students are required to have basic knowledge about the first, second and third law of thermodynamics.
	ESL.J408	Energy Conversion Ceramics Materials	John David Baniecki, Miyauchi Masahiro	4Q	The students are required to have basic knowledge of solid-state chemistry and physics.
	ESL.K450	Advanced course of combustion physics	Kosaka Hidenori, Tanahashi Mamoru, Suzuki Sayaka	3Q	
	ESL.L401	Mechanical-to-electrical energy conversion	Fujita Hideaki	3Q	Knowledge of mechanics and electromagnetics equivalent to high school-level physics
ESL.T436	Energy Scenario modeling	Wakeyama Tatsuya	3Q		

Graduate Major	No.	Course Name	Lecturer	Quarter	Eligibility criteria or prerequisite knowledge, etc.
Engineering Sciences and Design Energy Science and Engineering <Interdisciplinary graduate major>	ESD.D404	Design of Medical and Welfare Device	Hijikata Wataru	3Q	
	ESD.F403	UX / Interaction Design	Nishida Yoshifumi, Oono Mikiko	3Q	
	ESD.F404	Affective Engineering / Emotional Design	Kahlon Yuval, Fujii Haruyuki	3Q	
Human Centered Science and Biomedical Engineering Energy Science and Engineering <Interdisciplinary graduate major>	HCB.C422	Outline of Human Centered Science and Biomedical Engineering II	Yagi Tohru, Nakamura Kentaro, Yamaguchi Masahiro, Kitaguchi Tetsuya, Miura Yutaka, Ogura Shunichiro, Chang Tso-Fu, Tokuda Takashi	3Q	
	HCB.M464	Introduction to Neural Engineering	Yagi Tohru	3Q	
Nuclear Engineering Energy Science and Engineering <Interdisciplinary graduate major>	NCL.B401	Radiation Biology and Medicine	Matsumoto Yoshihisa	3Q	
	NCL.C401	Nuclear Fuel Cycle Engineering	Tsukahara Takehiko, Takao Koichiro, Harada Takuya, Takasu Hiroki	3Q	Students must have enough knowledge of nuclear chemistry and chemical engineering.
	NCL.C402	Radioactive Waste Management and Disposal Engineering	Tsukahara Takehiko, Takao Koichiro, , Nishihara Kenji	3Q	Students must have enough knowledge of nuclear chemistry and chemical engineering.
	NCL.C403	Nuclear Chemical Engineering	Kato Yuktaka, Harada Takuya, Takasu Hiroki, Nakase Masahiko	4Q	Students must have enough knowledge of nuclear chemistry and chemical engineering.
	NCL.D402	Experiments for Material Engineering in Nuclear Non-proliferation and Decommissioning B	Yoshida Katsumi, Yasui Shintaro, Takasu Hiroki	4Q	Student must have enough knowledge of nuclear materials. You need registration as a radiation worker (ZC Category A)
	NCL.D406	Experiments for Chemistry in Nuclear Non-proliferation, Fuel Debris and Back-end Fuel Cycle B	Tsukahara Takehiko, Takao Koichiro, Nakase Masahiko	4Q	Students must have enough knowledge of nuclear chemistry and chemical engineering. You need registration as a radiation worker (ZC Category A)
	NCL.D407	Experiment on Thermalhydraulic and Severe Accident Engineering	Kikura Hiroshige, Endo Gen, Kondo Masatoshi, Sagara Hiroshi, Takahashi Hideharu	4Q	Student must have enough knowledge of nuclear reactor thermal-hydraulics and nuclear safety.
Artificial Intelligence Energy Science and Engineering <Interdisciplinary graduate major>	ART.T462	Complex Networks	Murata Tsuyoshi	4Q	
	ART.T466	3D Computer Vision	Kanezaki Asako	4Q	Required: Basic knowledge of linear algebra and programming experience on Python
Urban Design and Built Environment Energy Science and Engineering <Interdisciplinary graduate major>	UDE.D417	Introduction to Methodological of Social studies	Kotani Hitomu	3Q	
	UDE.D448	Architectural Awareness & Design	Nasu Satoshi	4Q	
	UDE.P404	City/Transport Planning and the Environment	Muromachi Yasunori	3Q	Basics of Transport Planning, Urban Planning, and Traffic Engineering
	UDE.S436	Earthquake Ground Motion	Tsuno Seiji	3Q	
Earth-Life Science Energy Science and Engineering <Interdisciplinary graduate major>	ELS.C432	Communicating Earth-Life Science to the World M	Hernlund John William, Mcglynn Shawn, Heenatigala Thilina Nishadh	3Q	Students must have a basic understanding of physics and chemistry.
	ELS.B402-02	Research Planning for Master Thesis II 【2】	Academic Supervisor	4Q	
Global awareness and other breadth courses	LAW.X418	Study on Japanese Companies and Industries I	Kobayashi Satoru, Tagami Atsushi, Zhang Shengde, Bosu Subrojati, Morikawa Junko, Nakamura Takashi, Wakabayashi Hitoshi, Sasaki Hiroshi, Sawada Mai, Lin Hongyi, Sasaki Yoshizumi, Nakano Masaaki	3Q	
	LAW.X441	Tohoku Co-learning Camp (Leadership Course)	Yamaura Hiroshi, Takahashi Hideharu	4Q	
	LAW.X443	CAMPUS Asia Plus Fall Semester & Fall-Winter Program Research Exchange Project	Academic Supervisor	3~4Q	Limited to students who have visited Science Tokyo through the CA+ program.
Entrepreneurship courses	ENT.G401	Advanced Global Problem Based Co-Learning	Murakami Rie, Ota Eri, Ananda Kumara	4Q	
	ENT.G453	Technology and Product in Context	Nohara Kayoko, Salani Giorgio	4Q	
	ENT.G454	Our Sustainable Energy Future: Role of Business and Technology	Ota Eri, Murakami Rie, Ling Frank Hiroshi	3Q	
	ENT.G456	Free your Creativity through Art (for graduate)	Ota Eri, Murakami Rie, Susanne Meyer	3Q	
	ENT.L456	Effective Teamwork in Global Companies	Ota Eri, Murakami Rie, Nguyen Dung Minh	4Q	

**\*Japanese courses**

Please check the following web site of Japanese language courses.

<http://js.ila.titech.ac.jp/web/japanese.html>